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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/666,262	09/17/2003	Richard A. Jewell	23308C	7756

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EXAMINER	
ALVO, MARC S	

ART UNIT	PAPER NUMBER
1731	

DATE MAILED: 02/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/666,262	JEWEIL ET AL	
	Examiner	Art Unit	
	Steve Alvo	1731	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 November 2004*.

2a)☒ This action is FINAL. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *8-13 and 18-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *8-13 and 18-21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Claim 18-21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term "treated fiber that is resistant to fiber length degradation during refining" does not have an antecedent basis and should be changed to –wherein said treated fiber that is resistant to fiber length degradation during refining–.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 18- 21 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over CANADIAN PATENT 1,134,564.

CANADIAN PATENT 1,134,564 provides a wood-derived cellulose fiber derived from wood that has been partially purified by a chemical pulping process, e.g. sulphate (kraft) or sulphite pulp fiber, and treats the pulp with a biocidal amount of copper salt (0.1%) to protect wood fibers from biodegradation (page 3, line 17), and drying the treated fiber (see page 6, lines 18-25). See CANADIAN PATENT 1 134 564 for using copper sulphate as a biocide, page 3a, line 4 and the Table on page 18, Fiber (I) for adding 0.65% "Boliden K 33"™ which comprises 14.8% copper salt, or 0.1% copper salt added to the fiber. The fiber containing the 0.1% copper salt would have the same properties as the instant product as it is the same composition, e.g. would also be "resistant to fiber length degradation during refining". The mere recitation of a newly discovered function, considered as inherebntly possesed by the prior art process, does not

cause claims drawn thereto to distinguish over the prior art. In re Best, 195 USPQ 430, 433(CCPA 1977).

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 18-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over CANADIAN PATENT 1 134 564 with or without NICHOLAS.

CANADIAN PATENT 1,134,564 provides a wood-derived cellulose fiber derived from wood that has been partially purified by a chemical pulping process, e.g. sulphate (kraft) or sulphite pulp fiber, and treats the pulp with a biocidal amount of copper salt (0.1%) to protect wood fibers from biodegradation (page 3, line 17), and drying the treated fiber (see page 6, lines 18-25). See CANADIAN PATENT 1 134 564 for using copper sulphate as a biocide, page 3a, line 4 and the Table on page 18, Fiber (1) for adding 0.65% "Boliden K 33"™ which comprises 14.8% copper salt, or 0.1% copper salt added to the fiber. The discovery of an optimum value of a result effective variable in a known process is ordinary within the skill of one of ordinary skill in the art. See, e.g. In re BOESCH, 205 USPQ2d 215,219 (CCPA 1980). One of ordinary skill in the art would necessarily and inevitably have optimized amount of copper salts depending upon the amount of biodegradation protection desired and/or required. If necessary the use of 0.25% copper salt is taught by NICHOLAS. It would have been obvious to use the copper salts of the Canadian Patent in the amounts taught by NICHOLAS. Table II of the CANADIAN

PATENT varies the copper sulphate content from 0.76% to 9.92% these figures are the percentage of copper in the fiber remaining from the original amount of fiber before washing according to methods A and B respectively. For example, in the first Example 13.4 mg/g of copper is in the fibers before washing. 76% of the 13.4 mg is retained or 10.03mg (0.01 g/g) of copper is retained in each gram of fiber.

Claims 8-10, 11/8, 11/9, 12/8, 12/9, 13/8 and 13/9 are rejected under 35 U.S.C. 103(a) as being unpatentable over CANADIAN PATENT 1 134 564 as applied to claim 14 above, and further in view of HUTH or SCHULTZ et al.

The Canadian Patent teaches that the fibers are treating (impregnating) a cellulose fiber derived from wood that has been partially purified by a chemical pulping process (kraft pulp) with at least one wood preservation agent, which includes all the well-known types of wood preservation agents. HUTH or SCHULTZ et al teaches that dideclydimethylammonium chloride and/or bromide are effective biocides which protect wood from biodegradation. It would have been obvious to use the biocide of HUTH or SCHULTZ et al as the well-known biocide of the Canadian Patent as it functions to preserve the wood. It would have been obvious to use the n dideclydimethylammonium chloride and/or bromide of HUTH or SCHULTZ et al with the copper salts of the Canadian Patent for their additive effects. The pulp of the CANADIAN Patent is made from wood, e.g. sulphate pulp is made of wood fibers from which most of the lignin has been removed. One of ordinary skill in the art would expect a wood preservative to preserve the wood pulp of the CANADIAN Patent. Table II of the CANADIAN PATENT varies the copper sulphate content from 0.76% to 9.92% these figures are the percentage of copper in the fiber remaining from the original amount of fiber before washing according to

methods A and B respectively. For example, in the first Example 13.4 mg/g of copper is in the fibers before washing. 76% of the 13.4 mg is retained or 10.03mg (0.01 g/g) of copper is retained in each gram of fiber.

Claims 9, 11/9, 12/9 and 13/9 are rejected under 35 U.S.C. 103(a) as being unpatentable over CANADIAN PATENT 1 134 564 in view of HUTH or SCHULTZ et al as applied to claim 1, with or without NICHOLAS.

The Canadian Patent teaches that the fibers are treating (impregnating) a cellulose fiber derived from wood that has been partially purified by a chemical pulping process (kraft pulp) with at least one wood preservation agent, which includes all the well-known types of wood preservation agents. The discovery of an optimum value of a result effective variable in a known process is ordinary within the skill of one of ordinary skill in the art. See, e.g. In re BOESCH, 205 USPQ2d 215,219 (CCPA 1980). One of ordinary skill in the art would necessarily and inevitably have optimized amount of copper salts depending upon the amount of biodegradation protection desired and/or required. If necessary the use of 0.25% copper salt is taught by NICHOLAS. It would have been obvious to use the copper salts of the Canadian Patent in the amounts taught by NICHOLAS. The pulp of the CANADIAN Patent is made from wood, e.g. sulphate pulp is made of wood fibers from which most of the lignin has been removed. One of ordinary skill in the art would expect a wood preservative to preserve the wood pulp of the CANADIAN Patent. NICHOLAS in Example 2 that Cu at 0.25% can be used. Also in Table I, NICHOLAS shows that as low as 53 ppm copper alone is effective in inhibiting *I lacteus* (IC_{50} = 53/ppm). IC_{50} is the concentration in parts per million at which relative fungal growth is inhibited by 50%. HUTH or SCHULTZ et al teaches that dideclydimethylammonium chloride

and/or bromide are effective biocides which protect wood from biodegradation. It would have been obvious to use the biocide of HUTH or SCHULTZ et al as the well-known biocide of the Canadian Patent as it functions to preserve the wood. It would have been obvious to use the n dideclydimethylammonium chloride and/or bromide of HUTH or SCHULTZ et al with the copper salts of the Canadian Patent for their additive effects. The pulp of the CANADIAN Patent is made from wood, e.g. sulphate pulp is made of wood fibers from which most of the lignin has been removed. One of ordinary skill in the art would expect a wood preservative to preserve the wood pulp of the CANADIAN Patent. Table II of the CANADIAN PATENT varies the copper sulphate content from 0.76% to 9.92% these figures are the percentage of copper in the fiber remaining from the original amount of fiber before washing according to methods A and B respectively. For example, in the first Example 13.4 mg/g of copper is in the fibers before washing. 76% of the 13.4 mg is retained or 10.03mg (0.01 g/g) of copper is retained in each gram of fiber.

The argument that the CANADIAN PATENT is limited to 0.1% in the fiber and not to the range of 0.01-0.25% is not convincing as 0.1% is within the claimed range and meets the claim. As set forth in the rejection above, the mere recitation of a newly discovered function, considered as inherently possessed by the prior art process, does not cause claims drawn thereto to distinguish over the prior art. In re Best, 195 USPQ 430, 433(CCPA 1977). It is noted that claim 16 never calls for refining the lignocellulosic material, merely that the treated fiber that is resistant to fiber length degradation during refining. This property is due to the amount of copper in the fiber, see instant specification, paragraph bridging pages 3 and 4, and would not differ from the copper treated fiber of the CANADIAN PATENT.

Applicant's arguments that NICHOLAS teaches at 0.25% the copper alone is very poor antifungal protector is not convincing as NICHOLAS in Example 2 that Cu at 0.25% can be used. Also in Table I, NICHOLAS shows that as low as 53 ppm copper alone is effective in inhibiting *I lacteus* (IC_{50} = 53/ppm). IC_{50} is the concentration in parts per million at which relative fungal growth is inhibited by 50%.

The argument that the some of the references teach preserving wood which is different than preserving pulp is not convincing. The pulp of the CANADIAN Patent is made from wood, e.g. sulphate pulp is made of wood fibers from which most of the lignin has been removed. One of ordinary skill in the art would expect a wood preservative to preserve the wood pulp of the CANADIAN Patent.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steve Alvo whose telephone number is 571-272-1185. The examiner can normally be reached on 5:45 AM - 2:15 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Steve Alvo
Primary Examiner
Art Unit 1731

msa